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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/480,193 | 01/10/2000 | Shi-Jun Yang | IR 3556 | 4031 |

7590 01/14/2004

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| EXAMINER |
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UHLIR, NIKOLAS J

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| ART UNIT | PAPER NUMBER |
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1773

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/480,193

Applicant(s)

YANG ET AL.

Examiner

Nikolas J. Uhler

Art Unit

1773

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 18 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ they raise the issue of new matter (see Note below);
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attached sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.Claim(s) objected to: none.Claim(s) rejected: 1,3-6 and 8-17.Claim(s) withdrawn from consideration: none.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

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Continuation of box 5(c):

The declaration submitted by the applicant has been considered but does not place the application in condition for allowance. This is due to the fact that the applicant's declaration does not provide sufficient detail to allow the examiner to determine that the applicant is indeed comparing the closest prior art to that of the instantly claimed invention. In particular, while the examiner acknowledges that the composition of the particles discussed in the declaration appear to be the same as that of the Hennig reference, there is sparse detail in regards to how exactly the particles in the declaration were made beyond simple mixing of the components in water and stirring/heating them for a specified time. Further, there appears to be at least one substantial and obvious difference between the particles of the closest prior art and that of the particles in the submitted declaration. Specifically, the particles in the declaration have a particle size of $\sim 48\text{-}50\mu$ (as shown in the lower right corner of one of the lab notebook pages submitted in the declaration), whereas in example 1 of Hennig (which meets the applicant's claimed compositional and light transmission properties) the particles of the Hennig reference have a particle size of $\sim 37\mu$. Thus, the particles in the declaration are $\sim 29\text{-}35\%$ larger than those of the sole example disclosed in the closest prior art (See Hennig, example 1). Because of the lack of detail as to how the particles of the declaration were made, and because of the large discrepancy in the particle size, it is not clear to the examiner whether the particles in the declaration are equivalent to the particles in the closest prior art. Accordingly, the applicant's comparison in the declaration is not deemed by the examiner to be a valid comparison of the closest prior


art to that of the instant invention. Thus, applicant's arguments/declaration are unpersuasive and are insufficient to overcome the previously asserted grounds of rejection.

Further, in the interest of advancing the examination of this application and clarifying the examiner's position to the applicant, the examiner notes that upon further consideration of the Hennig reference it is clear that even if it is established that the particles in the submitted declaration are equivalent to the particles of the closest prior art, the comparison of one loading of particles (i.e. 70/30 PMMA/particles) to that of the claimed invention is not sufficient to overcome the Hennig reference as a whole. Many of the instant claims do not require a minimum loading of particles into the binder, and instead rely on properties to limit the scope of the claims (see for example, claim 1). By requiring all of these property limitations, the applicant is effectively narrowing the scope of his claims to those mixtures of polymer and binder that meet those properties. The lack of a minimum loading of particles in some of the claims is a substantial issue in this case, as Hennig teaches particles having a composition and particle size that on their face seem identical to that of the particles utilized by the instant invention, and teaches loading them into a binder having an identical composition as one of the claimed binders. To illustrate this issue, example 1 of Hennig clearly meets the applicants claim 1, 3-5, 8-9 compositional, particle size, and light transmission requirements. As these claims do not require a minimum amount of binder, and given all of the similarities in the composition of the claimed invention and the prior art, it is not clear that this example would not necessarily meet the other properties of these claims.

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Further, even in those claims that do recite a minimum loading of particles into the binder (i.e. claim 6), the loading range is quite broad (i.e. 5-60% by weight). Hennig teaches many particle loading ranges that have endpoints well within the claimed ranges. Although the examiner made the argument in the previous actions that it would be obvious to select 30% by weight particles, this was done because 30% is the endpoint of the *broadest* loading range of particles/binder disclosed/claimed by Hennig. However, Hennig also discloses more preferable (and lower) loadings of the particles into a binder. Specifically, loadings of 1.5-20%, more preferably 2-10% particles into a binder (see column 2, lines 59-65) are detailed. Thus, while a clear and direct comparison of the 30% loading may be sufficient to overcome the previous grounds of rejection, it is likely that the examiner would then present a new grounds of rejection (under 103(a)) asserting that it would be obvious to utilize one of the lower loadings (i.e. 1.5% particles/98.5% binder, 2% particles/98% binder, 10% particles/90% binder, 20% particles/80% binder) for the purpose of tailoring the opacity of the article, and that no evidence had been presented establishing that these compositions do not meet the applicant's claimed properties. Given the similarities in particle composition, particle size, binder composition, and loading, it is impossible for the examiner to distinguish Hennig as a whole from the claimed invention without a clear and direct comparison establishing that at least the clearly envisioned embodiments of Hennig do not meet the applicants claimed properties.

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